

Abstract

An iron-based casting alloy and a process for making the alloy are provided by combining an iron-carbon-chromium system with primary carbides of vanadium, niobium, titanium, or combinations thereof without any eutectic carbides of vanadium, niobium and titanium. Eutectic chromium carbides (M_7C_3) are also formed without any primary chromium carbides. Proeutectic austenite can also be formed in the alloy.